APHY 102 Lab Exam 1 Structures and Parts

Using models, diagrams, 35 mm slides, computer graphics, specimens or microscope slides, pictures from textbook and IvyLearn; be able to identify and know the function, meaning, location of the following:

A. Digestive System

1. Mouth

a. Nonkeratinized stratified squamous epithelium

2. Tongue

a. Taste Bud

b. Nonkeratinized stratified squamous epithelium

c. base

d. body

e. apex

3. Teeth

a. Incisors

b. Canines

c. Premolars

d. Molars

e. Crown

f. Neck

g. Root

h. Enamel

i. Dentin

j. Pulp

k. Root canal

l. Cementum

m. Periodontal ligament

n. Gingiva

4. Hard palate

5. Soft palate

a. Uvula

6. Epiglottis

7. Masseter muscle

8. Salivary glands

a. Parotid gland (mostly serous)

b. Parotid duct

c. Sublingual gland (mostly mucous)

d. Submandibular gland (mixed)

9. Pharynx

a. Nasopharynx

1. Ciliated pseudostratified columnar epithelium with goblet cells

b. Oropharynx

1. Nonkeratinized stratified squamous epithelium

c. Laryngopharynx

1. Nonkeratinized stratified squamous epithelium in upper

10. Epiglottis

11. Esophagus

a. Upper esophageal sphincter

b. Lower esophageal (cardiac) sphincter

c. Nonkeratinized stratified squamous epithelium

1. Mucous glands

12. Stomach

a. Greater omentum

b. Lesser omentum

c. Rugae

d. Greater curvature

e. Lesser curvature

f. Cardia

g. Fundus

h. Body

i. Pyloric area

j. Pyloric sphincter/pylorus

k. Simple columnar epithelium of mucous cells

l. Gastric glands

1. Chief cells – pepsinogen, gastric lipase

2. Parietal cells – HCl, intrinsic factor

3. Enteroendocrine cells – gastrin

13. Liver

a. Hepatic artery

b. Hepatic portal vein

c. Common hepatic duct

d. Bile duct after common hepatic duct merges with cystic duct

e. Liver lobules

f. Hepatocytes

g. Portal triad and porta hepatis

1. Hepatic artery branch

2. Hepatic portal vein branch

3. Bile ductule

h. Central vein

i. Lobes

a. Right

b. Left

c. Caudate

d. Quadrate

j. Falciform ligament

k. Ligamentum teres

14. Gallbladder

a. Cystic duct

15. Mesentary

16. Pancreas

a. Pancreatic duct

b. Islets of Langerhans

c. Acinar cells

17. Small Intestine

a. Duodenum

b. Jejunum

c. Ileum

d. Ileocecal valve/ileocolic valve

e. Circular folds

f. Villi

g. Microvilli (brush border)

h. Lacteal - lymph vessels

i. Peyer’s patches – aggregates of white blood cells

j. Simple columnar epithelium with goblet cells

1. Absorptive cells

2. Enteroendocrine cells – secretin, CCK

3. Paneth cells – lysozyme

k. Intestinal crypt

18. Large Intestine (spiral colon in pigs)

a. Cecum

b. Appendix

c. Ascending colon

d. Transverse colon

e. Descending colon

f. Sigmoid colon

g. Rectum

h. Anal sphincter

1. Internal anal sphincter

2. External anal sphincter

i. Teniae coli (longitudinal muscle)

j. Haustra

k. Epiploic appendages

19. Blood vessels

a. Abdominal aorta

b. Inferior vena cava

c. Celiac trunk

d. Superior mesenteric artery

e. Inferior mesenteric artery

f. Common hepatic artery

g. Hepatic portal vein

20. Basic Structure of Alimentary Canal

a. Mucosa

1. epithelium

2. lamina propria

3. muscularis mucosae

b. Submucosa

c. Muscularis externa

d. Serosa

B. Respiratory System

1. Nose

a. Nasal septum

b. Ciliated pseudostratified columnar epithelium with goblet cells

c. Vibrissae (hairs)

2. Nasal Conchae

a. Superior

b. Middle

c. Inferior

3. Pharynx

a. Nasopharynx

1. Ciliated pseudostratified columnar epithelium with goblet cells

b. Oropharynx

1. Nonkeratinized stratified squamous epithelium

c. Laryngopharynx

1. Nonkeratinized stratified squamous epithelium in upper

4. Tonsils

a. Pharyngeal (adenoids)

b. Palatine

c. Lingual

5. Hyoid bone

6. Larynx

a. Epiglottis

b. Vestibular fold

c. Thyroid cartilage

d. Cricoid cartilage

e. Vocal fold/cord

f. Glottis

g. Epithelium

1. Nonkeratinized stratified squamous epithelium in upper

2. Ciliated pseudostratified columnar epithelium with goblet cells in lower

7. Trachea

a. Cartilage rings – hyaline cartilage

b. Trachealis muscle

c. Ciliated pseudostratified columnar epithelium with goblet cells

8. Primary bronchus

9. Lobar (secondary) bronchus

10. Segmental (tertiary) bronchus

11. Bronchiole

a. Ciliated simple cuboidal epithelium

b. Smooth muscle controls diameter and can affect airflow

c. Terminal, respiratory bronchioles

12. Alveoli

a. Type I alveolar cell

b. Type II alveolar cell

c. Alveolar macrophage (dust cell)

Respiratory membrane

1. Type I alveolar cell (simple squamous)

2. Shared basement membrane

3. Capillary endothelium (simple squamous)

13. Conducting zone structures vs. respiratory zone structures

14. Lungs

a. Apex

b. Base

c. Costal surface

d. Cardiac notch (left lung)

e. Lobes (three on right, two on left)

f. Hilum

g. Smoker vs. healthy lung

h. lung x-ray

15. Pleura

a. Parietal pleura

b. Visceral pleura

c. Pleural cavity

16. Diaphragm

17. Thoracic cavity

18. Thoracic aorta

19. Pulmonary artery, vein, capillary

20. Lung volumes

a. Tidal volume

b. Inspiratory reserve volume

c. Expiratory reserve volume

d. Residual volume

e. Inspiratory capacity

f. Functional residual capacity

g. Vital capacity

h. Total lung capacity

**Fetal Pig**

Masseter

Parotid gland

Submandibular gland

Hard palate

Soft palate

Epiglottis

Heart

Larynx

Trachea

Lungs

Diaphragm

Inferior vena cava

Esophagus

Thoracic aorta

Abdominal aorta

Liver

Gallbladder

Stomach

Small intestine

Spleen

Large intestine (spiral colon)

Rectum

Pancreas

Mesentery

Urinary bladder